

Title (en)

One-piece flow control valve for fluid filter assembly

Title (de)

Einstückiges Stromregelventil für eine Flüssigkeitsfilteranordnung

Title (fr)

Soupape monobloc de réglage du débit pour un dispositif de filtration de liquide

Publication

EP 1671691 A1 20060621 (EN)

Application

EP 05109915 A 20051024

Priority

US 99906104 A 20041130

Abstract (en)

A fluid filter assembly comprises a casing, an end plate closing off the casing, a filter element disposed within the casing, and a one-piece flow control valve combining functions of a pressure relief valve and an anti-drainback valve. The end plate has a central outlet opening and an inlet opening radially spaced from the central outlet opening. The annular filter element divides the casing into an inlet chamber communicating with the inlet opening and an outlet chamber communicating with the central outlet. The fluid filter assembly further includes at least one bypass passage fluidly connecting the inlet chamber to the outlet chamber. The flow control valve has a single-piece valve body made of a resilient material and includes an anti-drainback valve, a central opening therethrough normally closed by the anti-drainback valve and a bypass valve normally closing the at least one bypass passage.

IPC 8 full level

B01D 27/10 (2006.01)

CPC (source: EP US)

B01D 27/103 (2013.01 - EP US); **B01D 27/106** (2013.01 - EP)

C-Set (source: EP US)

B01D 27/103 + B01D 27/106

Citation (applicant)

- US 6136183 A 20001024 - SUZUKI YASUYOSHI [JP], et al
- US 3369666 A 19680220 - HERBERT HULTGREN WILLIAM, et al

Citation (search report)

- [XP] US 6936162 B1 20050830 - MCKENZIE DARRELL T [US]
- [A] US 6136183 A 20001024 - SUZUKI YASUYOSHI [JP], et al
- [A] US 3802564 A 19740409 - TURMAN W
- [A] US 3369666 A 19680220 - HERBERT HULTGREN WILLIAM, et al

Cited by

CN112584911A; WO2007014852A1; US11826671B2; WO2020043663A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1671691 A1 20060621; EP 1671691 B1 20081224; AT E418374 T1 20090115; CA 2525921 A1 20060530; DE 602005011921 D1 20090205; US 2006113227 A1 20060601

DOCDB simple family (application)

EP 05109915 A 20051024; AT 05109915 T 20051024; CA 2525921 A 20051108; DE 602005011921 T 20051024; US 99906104 A 20041130